

STUDIES IN THE EUPATORIEAE (COMPOSITAE). XXVII.

A MONOGRAPH OF THE GENUS, TRICHOCORONIS

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The genus Trichocoronis is presently recognized as consisting of two species of Mexico and the Southwestern United States. A third species (Trichocoronis rivularis A. Gray) has recently been transferred to a new genus, Shinnersia (King & Robinson, 1970).

- Trichocoronis A. Gray, Mem. Am. Acad. n.s. 4: 65. 1849.
Margacola Buckley, Proc. Acad. Sc. Phila. 457. 1861.
Biolettia E. L. Greene, Pittonia 2: 216. 1891.

Inflorescence monocephalic to laxly branched; heads 75-125 flowered; receptacle convex to conical; corolla tubular above, sharply constricted below; lobes about as long as broad; pappus of 2-6 short setae; achenes prismatic, 4-5 ribbed; carpopodium distinct, tapering, of small isodiametric usually thick-walled cells.

Type species Ageratum wrightii A. Gray.

Key to the species of Trichocoronis

- 1a. Inflorescences sparingly branched; peduncles slender; heads ca. 5 mm wide T. wrightii
1b. Inflorescences monocephalic; peduncles slightly incrassate; heads ca. 1 cm wide. T. sessilifolium

Trichocoronis wrightii (A. Gray) A. Gray, Mem. Am. Acad. n.s. 4: 65. 1849.

Ageratum wrightii A. Gray, Proc. Am. Acad. 1: 46. 1848.

[UNITED STATES: Texas: without precise locality, low places in the prairies along the Colorado River above Columbus, Wright (Holotype GH!).]

We recognize the following two varieties.

Trichocoronis wrightii (A. Gray) A. Gray, var. wrightii
Margacola parvula Buckley, Proc. Acad. Sc. Phila. 457. 1861

(1862). [UNITED STATES: Texas: Refugio Co.: near Refugio, May 1860, Buckley s.n. (Holotype ANS!).]

Biolettia riparia E. L. Greene, Pittonia 2: 216. 1891.

[UNITED STATES: California: San Joaquin Co.? "along the

banks of the lower San Joaquin River", Bioletti s.n.
(Type not seen¹).

Trichocoronis riparia (E. L. Greene) E. L. Greene, *Erythra*
1: 42. 1893.

Small ascending herb to 30 cm tall, not or sparingly branched. Stems faintly striate with rather long eglandular hairs. Leaves sessile, opposite below, becoming alternate above; blades thin, oblong, up to 2.5 cm long and up to 1 cm wide, rather palmately veined; margin serrate; apex acuminate with few long eglandular hairs on both surfaces. Inflorescence scarcely to considerably laxly branched. Heads 4-5 mm high, 75-100 flowered. Phyllaries in 2-3 series, subequal, green at base becoming maroon toward apex, ca. 30, with 3-4 striae, glabrous, apex acute. Receptacle convex to conical, rather warty, naked. Corollas tubular above, sharply constricted below, 1.0-2.0 mm long, lower portion of the throat white, upper portion of the throat maroon, lobes white. Pappus of 2-5 (6) setae, ca. 1 mm long. Achenes prismatic, brown when mature, 1.0-1.25 mm long, 4-5 ribbed, ribs setose, setae stiff, slender, of thick-walled cells. Carpodium well developed, tapering, of small isodiametric thick-walled cells, bottom row of cells very large. Pollen tricolpate, spherical, spinose, ca. 18 μ diam. Chromosome number determined as $n = 15$ (Turner, Powell, and King, 1962).

UNITED STATES: California: Colusa Co.: Davis Tule, near Sycamore Slough, Stinchfield 434 (NY); 7 mi. E of Arbuckle, Tucker 2675 (UC); 17 mi. N of Knights Landing, Nobs and Smith 1890 (UC). Merced Co.: Los Banos Wildlife Refuge, 2 mi. N of Los Banos, Nobs and Smith 160 (UC). Riverside Co.: San Jacinto Lake, near Moreno, Munz and Johnston 5541 (UC); near Beaumont, July 1911, Hasse s.n. (UC). San Joaquin Co.: near Lothrop, Oct. 1891, Brandegge s.n. (NY). Texas: Aransas Co.: 3 mi. N of Rockport, Whitehouse 18284 (MICH, NY, US). Cameron Co.: Laguna Atascosa Natural Wildlife Refuge, Fleetwood 3598 (TEX), 7010 (TEX), Traverse 1055 (TEX), 1083 (TEX, US); Rio Hondo, Chandler 7049 (GH, NY, UC); near Almito, Lundell and Lundell 10761 (LL, MICH);

¹Apparently the type collection is not extant. The only collection made by Bioletti that has been seen by the authors is Michener and Bioletti s.n. San Joaquin Co.: San Joaquin Bridge, 9 Sept. 1892. This collection was, however, made after the species was described and cannot serve as the type. We have inquired without success of Notre Dame University where the Greene collection is housed and we wish to acknowledge the aid of C. V. Morton who checked for us at the Royal Botanic Gardens at Kew where the Bioletti collection is housed. Under the circumstances we designate the collection by Michener and Bioletti as neotype (UC).

Sarita, Lewton 185 (LL); Brownsville, Pringle 2244 (GH), Runyon 6019 (LL, TEX); 5 mi. N of Brownsville, Warren 1112 (LL); vicinity of Brownsville, Ferris and Duncan 3102 (NY). Hidalgo Co.: S of Alamo, Clover 876 (MICH). Kenedy Co.: King Ranch, Lundell and Correll 15162 (LL). Kleberg Co.: King Ranch, Johnston 5467 (TEX); Riviera, Tharp 7500 (LL, TEX). Nueces Co.: 6 mi. W of Chapman Ranch, Correll and Johnston 17794 (LL). Refugio Co.: 5 1/3 mi. SE of Austwell, Cory 48949 (GH, NY); 7.5 mi. E of Refugio, Wilkins 9781 (PH). Willacy Co.: W of Raymondsville, Clover 1770 (LL, MICH).

MEXICO: San Luis Potosí: El Naranjo, municipio de Ciudad del Maíz, Rzedowski 7319 (ENCB). Tamaulipas 60 mi. S of Matamoros, LeSueur 515 (F, TEX); 24 mi. N of San Fernando, Crutchfield and Johnston 5340 (LL, MEXU, TEX, UC); Victoria, Tharp 2602 (LL, TEX, UC); Villa Juárez, Perkins and Hall 3509 (F); 2 mi. NE of Altamira, King 4034 (F, NY, TEX, UC, US).

Trichocoronis wrightii var. wigginsii R. M. King and H. Robinson, var. nov.; a T. wrightii differt statura majore, floribus 100-125, carpodiorum cellulis minus incrassatis. [MEXICO: Baja California: Llano de Caquhui in Sierra de la Giganta, W of Los Dolores. Lat. 24 56 N, Long. 110 52 W, 17 Nov. 1959, Wiggins 15533B (Holotype DS!)].

It is a pleasure to name this somewhat distinctive geographically isolated entity for Dr. Ira L. Wiggins of Stanford University. Dr. Wiggins' collecting and writings have added greatly to our knowledge of this part of Mexico.

Trichocoronis sessilifolia (Schauer) B. L. Robinson, Proc. Am. Acad. 32: 35. 1906.

Ageratum sessilifolium Schauer, Linnaea 19: 715. 1847

[MEXICO: without precise locality, Aschenborn 4 (Type B, destroyed²)].

Trichocoronis greggii A. Gray, Smiths. Contr. Knowl.

3: 89. 1850. [MEXICO: Michoacán: low dry plain E of Zipimeo, 11 May 1849, Gregg 807 (Holotype GH!, isotypes MO! NY!)].

Small ascending to erect herb, up to 30 cm tall, unbranched. Stems faintly striate, with rather long eglandular hairs. Leaves sessile, opposite, somewhat thicker than T. wrightii, oblong, up to 2 cm long and up to 1 cm wide, rather palmate-veined; margin

²Since the type at Berlin has been destroyed and since there is no evidence of duplicates elsewhere, we select as neotype the Gregg 807 from Mexico which is the holotype of T. greggii.

serrate, apex acuminate with a few long eglandular hairs on both surfaces. Inflorescences monocephalic, peduncles slightly incrassate. Heads 4-5 mm high, ca. 125 flowered. Phyllaries in 2-3 series, subequal, greenish, becoming maroon toward the apex, ca. 30, with 3-4 striae, glabrous, apex acute. Receptacle conical, rather warty, naked. Corollas tubular above, sharply constricted below, ca. 2.5 mm long, lower portion of throat white, upper portion of throat maroon, lobes white, with a few septate eglandular hairs on the back. Pappus of 2-5 setae, ca. 0.5 mm long. Achenes prismatic, dark brown when mature, ca. 1.25 mm long, 4-5 ribbed, ribs setose, setae stiff, slender, of thick-walled cells. Carpodium well developed, tapering, of small isodiametric thick-walled cells, bottom row of cells very large. Pollen tricolpate, spherical, spinose, ca. 18 μ diam. Representative specimens examined:

MEXICO: Federal District: Valley of Mexico, Pringle 7450 (F, MO, US). Jalisco: Marshes of Atequiza, Pringle 3110 (ENCB, F, G, GH, LL, MEXU, MO, ND-G, NY, UC, US). Michoacan: vicinity of Morelia, Arsène 8448 (MO, US).

Literature Cited

- Turner, B. L., A. M. Powell, and R. M. King. 1962. Chromosome numbers in the Compositae. VI, Additional Mexican and Guatemalan species. *Rhodora* 64: 251-271.
- King, R. M. and H. Robinson 1970. Studies in the Eupatorieae (Compositae) XII. A new genus Shinnersia. *Phytologia* 19: 297-298.